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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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STERNE, KESSLER, GOLDSTEIN & FOX PLLC  
1100 NEW YORK AVENUE, N.W.  
WASHINGTON, DC 20005

EXAMINER

DUONG, FRANK

ART UNIT PAPER NUMBER

2616

DATE MAILED: 11/14/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/737,276

Applicant(s)

KOLZE, THOMAS J.

Examiner

Frank Duong

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 25 August 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 32 and 34-53 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 32 is/are allowed.
- 6) ☒ Claim(s) 34-53 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 13 December 2000 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                  | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### DETAILED ACTION

1. This Office Action is a response to communications dated 08/25/06. Claims 32 and 34-53 are pending in the application.

#### ***Drawings***

2. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the claimed limitations of *"storing at least one first user unique parameter corresponding with a first carrier frequency"*, *"storing at least one second user unique parameter corresponding with a second carrier frequency that is different from the first carrier frequency"*, as recited in claims 40-42; *"wherein the at least one first user unique parameter includes at least one selected from the group consisting of a transmit power level, fine frequency tuning information, timing information, and transmit equalization information"*, as recited in claim 41; *"allocating a wide-band channel for transmission of relatively long packets; allocating a narrow-band channel for transmission of relatively short packets; and transmitting a data packet having a data packet length using either the wide-band"*, as recited in claim 43-50; and *"allocating a first carrier frequency for communication of comparatively short packets using a comparatively low symbol rate; allocating a second carrier frequency that is different from the first carrier frequency for communication of comparatively long packets using a comparatively high symbol rate"*, as recited in claim 51-53 must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

### ***Specification***

3. The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required: The original specification must fully disclose the following claimed limitations "*storing at least one first user unique parameter corresponding with a first carrier frequency*", "*storing at least one second user unique parameter corresponding with a second carrier frequency that is different from the first carrier*

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frequency", as recited in claims 40-42; *"wherein the at least one first user unique parameter includes at least one selected from the group consisting of a transmit power level, fine frequency tuning information, timing information, and transmit equalization information"*, as recited in claim 41; *"allocating a wide-band channel for transmission of relatively long packets; allocating a narrow-band channel for transmission of relatively short packets; and transmitting a data packet having a data packet length using either the wide-band"*, as recited in claim 43-50; and *"allocating a first carrier frequency for communication of comparatively short packets using a comparatively low symbol rate; allocating a second carrier frequency that is different from the first carrier frequency for communication of comparatively long packets using a comparatively high symbol rate"*, as recited in claim 51-53.

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4. Claims 40-53 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. There is no support in the original specification for the following claimed limitations in the newly added claims: *"storing at least one first*

*user unique parameter corresponding with a first carrier frequency”, “storing at least one second user unique parameter corresponding with a second carrier frequency that is different from the first carrier frequency”, as recited in claims 40-42; “wherein the at least one first user unique parameter includes at least one selected from the group consisting of a transmit power level, fine frequency tuning information, timing information, and transmit equalization information”, as recited in claim 41; “allocating a wide-band channel for transmission of relatively long packets; allocating a narrow-band channel for transmission of relatively short packets; and transmitting a data packet having a data packet length using either the wide-band”, as recited in claim 43-50; and “allocating a first carrier frequency for communication of comparatively short packets using a comparatively low symbol rate; allocating a second carrier frequency that is different from the first carrier frequency for communication of comparatively long packets using a comparatively high symbol rate”, as recited in claim 51-53.*

It is understood the present invention remedies the disadvantage of a cable modem (CM) in a prior art DOCSIS system by modifying the ranging process of the DOCSIS standard to allow a cable modem to initialize/range on multiple channels to improve performance of short bursts in an impulsive noise environment. There are two techniques for doing so as disclosed in the original specification: a first technique entails an alteration to a DOCSIS compliant CM and a second technique involves a modification to the DOCSIS specification. Both of these techniques are disclosed on pages 23-24 of the original specification in reference to a flow diagram of Figure 9, blocks 914-920. In accordance with the description of blocks 914-912, there are

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features that the CM is encoded with vendor specific information for identifying special capabilities to let the headend know that it is capable of being initialized on more than one channels and the CM, during the registration process, sends a message to the headend requesting initializing on more than one channels. The disclosed invention deals only with a process or procedure for allowing the CM to range on multiple channels, not the time slots or resource allocation in a DOCSIS system. Therefore, from the above features, the claimed limitations of *"storing at least one first user unique parameter corresponding with a first carrier frequency"*, *"storing at least one second user unique parameter corresponding with a second carrier frequency that is different from the first carrier frequency"*, as recited in claims 40-42; *"wherein the at least one first user unique parameter includes at least one selected from the group consisting of a transmit power level, fine frequency tuning information, timing information, and transmit equalization information"*, as recited in claim 41; *"allocating a wide-band channel for transmission of relatively long packets; allocating a narrow-band channel for transmission of relatively short packets; and transmitting a data packet having a data packet length using either the wide-band"*, as recited in claim 43-50; and *"allocating a first carrier frequency for communication of comparatively short packets using a comparatively low symbol rate; allocating a second carrier frequency that is different from the first carrier frequency for communication of comparatively long packets using a comparatively high symbol rate"*, as recited in claim 51-53, cannot unambiguously derive to reasonably convey to one skilled in the relevant art that the inventors, at the time the application was filed, had possession of the claimed invention.

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The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 34-39 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

As per claims 34-39, the claims are deemed to be indefinite for the following rationales:

The claimed invention does not tie to any technological art.

It is so broad that the claimed invention encompasses every possible system to include IEEE-802.16, IEEE-802.14 and future DOCSIS systems, while the original specification disclosed at most relates to the DOCSIS 1.1 system. Thus, the claimed invention fails to clearly set forth the metes and bounds of the patent protection desired.

It eliminates an essential step of receiving a MAP message from the headend or sending a request for ranging on multiple channel to amount to a gap between the steps.

*(note: Due to the problems discussed above, there is no art applied to determine the allowability of claims 40-53 at this time)*

#### ***Allowable Subject Matter***

6. Claim 32 is allowed.

7. Claims 34-39 would be allowable if rewritten or amended to overcome the



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rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action.

### ***Conclusion***

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Horton, Jr. et al. (USP 6,606,352).

Lee et al (USP 7,017,176).

Sdralia et al, Performance Characterisation of the MCNS DOCSIS 1.0 CATV Protocol with Prioritised First Come First Served Scheduling, IEEE, pages 196-205, 1999.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Frank Duong whose telephone number is 571-272-3164. The examiner can normally be reached on 7:00AM-3:30PM, Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ahmad Matar can be reached on 571-272-7488. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



**FRANK DUONG**  
**PRIMARY EXAMINER**

November 10, 2006